HARMONY GOLD (AUSTRALIA) PTY LTD

ANNUAL EXPLORATION REPORT

EL 10213

MAUD CREEK EAST

YEAR ENDING 19TH JUNE 2004

KATHERINE SD-53-9 (1:250,000)
KATHERINE 5369 (1:100,000)

Distribution:

DBIRD Darwin NT
Harmony Gold (Australia) P/L Perth WA

Compiled by:
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SUMMARY

EL10213 is centred 30km east of Katherine, NT. It is to the east of and contiguous with the company’s Maud Creek tenements.

The tenement was originally granted on 20th June 2000 to Katherine Mining NL. At that time Hill 50 Gold Limited was arranging purchase of the Maud Creek gold project and was establishing an exploration tenement asset base to supplement a planned mining operation at Maud Creek. It acquired the tenement as part of this transaction.

In mid 2002 Harmony Gold (Australia) Pty Ltd acquired all the assets of Hill 50 Gold including its Northern Territory tenement holdings and continued diamond and RC drilling programs in the central Maud Creek Goldfield.

EL 10213 covers a sector of Lower Proterozoic Tollis Formation rocks that correlate with the sequence hosting gold mineralisation at the Maud Creek mining centre. At this location Tollis Formation rocks are exposed as erosion windows in younger sandstones of the Kombolgie Formation, in Cambrian Antrim Plateau Volcanics and in Cretaceous sediments.

During 2003 Harmony commissioned a photogeological study centred on the Maud Creek mining centre. The study area included the westernmost sector of EL 10213. The work included an interpretation of the airborne magnetic and radiometric data as well as topography.

During the previous two years Harmony focused on exploratory RC and diamond core drilling at the adjacent Maud Creek project with the objective of extending the gold resource base of the project. While a significant gold resource was outlined at the Main Zone, Harmony concluded that the Maud Project did not meet corporate objectives and resolved to sell the assets in early 2004. Several expressions of interest by third parties have been made and it is hoped a sale of all the tenements will be concluded in the near future. In the interim Harmony has suspended field operations on the Maud Project including EL10213.
1. **INTRODUCTION**

This report covers exploration work performed on EL10213 during the year ended 19th June 2004. The tenement is part of Harmony Gold’s Maud Creek project and is contiguous with the project tenements. Exploration expenditure on the project area as a whole has been at a high level since Hill 50 acquired the ground in 2000.

2. **LOCATION AND ACCESS**

EL10213 is centred some 30km east of Katherine in the NT. Minor tracks and fence lines give access to the tenement either east from Maud Creek mining centre or north from the Stuart Highway via a track to King River and Rodgers Knoll. See Fig. 1. Internal access is not well developed and only 4WD is effective.

3. **TENEMENT DETAILS**

EL 10213 of 20 blocks was applied for by Katherine Mining NL on 23 September 1998. The tenement was granted on June 20th 2000. Date of expiry was noted as 19th June 2006. (See Fig. 1 for location).

Harmony Gold (Australia) Pty Ltd acquired the tenement in mid 2002 when it made a successful bid for Hill 50 Gold Limited and acquired the Maud Creek Project.

Hill 50 was granted waiver from reduction requirements under Section 28 of the Mining Act, enabling retention of the 20 blocks until 19th June 2003.

Harmony applied for further waivers from reduction and these were granted until 19th June 2005, giving the company time to evaluate the adjacent Maud Creek project and more recently to conclude an orderly sale of the Project tenements. The covenant for the current year is $4,700.00.

4. **GEOLOGICAL SETTING** (after Snodin)

4.1 **Topography**

The relief of the project area is variable from undulating plains, rounded low hill, ridge and mesa topography, to the elevated, scarped and deeply dissected landforms of the south western margin of the Arnhem Land Plateau.

The Katherine River flows southwest across the northwest corner of the Maud project area and other drainages are tributaries to this system and flow from the east and south.

4.2 **Local Geology**

The area straddles the southern margin of exposed Early Proterozoic rocks of the Pine Creek Geosyncline represented here by the Finniss River and younger Edith River Groups. Only the upper part of the Finniss River sequence is represented and...
comprises the greywacke/tuff assemblage of the Tollis Formation and the interleaved mafic rocks of the Dorothy Volcanic Member. These were folded (Maud Creek Event) and prior to, or concurrent with this, there was emplacement of sills and more irregular bodies of the Maud Dolerite.

The Edith River Group rests unconformably on the folded Finnis River rocks and is dominated by ignimbrite, rhyolite, basalt and tuff of the Plum Tree Creek Volcanics. A local rhyolite component (Mount Shepherd Rhyolite) also crops out which may represent an acid dome (Kruse et al., 1994).

The Edith River Group is overlain by the Middle Proterozoic Katherine River Group of the McArthur Basin. In the project area it comprises the oldest parts of the sequence (sandstone-dominant Kombolgie Formation with interlayered volcanic members) which crop out extensively in the northwest and northeast. The basal contact is locally concordant, but in a more regional sense is unconformable and transgressive. The Kombolgie Formation was folded on northwest-trending axes with geometry possibly related to reactivation of basin faults. It was also intruded along fault/fractures by numerous NE-trending dolerite dykes.

A hiatus followed until Cambro-Ordovician times when flood basalts of the Antrim Plateau Volcanics and the overlying Tinda Limestone of the Daly Basin were deposited. Their outcrop, together with local remnants of Cretaceous sedimentary rocks, conceals older units in the southern third of the project area.

**4.3 Gold Mineralisation**

Known gold mineralisation occurs mainly near and within the southernmost large outcrop area of Maud Dolerite on both sides of Maud Creek. Early workings were in alluvium and veined and fractured Maud Dolerite, but later the Main Zone Deposit was delineated in a northerly striking reverse fault setting in metasediment and mafic volcanics near the western margin of the intrusion. This northerly striking reverse fault is possibly a splay off a more ductile fault zone that is thought to run north westerly along Maud Creek. The oxidised and some transition portions have been mined (AngloGold 2000) and Harmony has continued drill-testing the primary mineralisation since acquiring the project.

The mineralisation occurs at the sheared/brecciated contact between bedded Tollis Formation sediments (footwall) and mafic tuff (hanging wall). The contact (Main Zone Structure) is a N-striking, E-dipping complex multistage reverse dislocation cut by cross-faults which interacted to assist dilation and focusing of the mineralisation (Harmony, 2002).

Other known mineral occurrences in the project area are Mount Gates, Chessman-Red Queen and Carpentaria Valley.

Mount Gates occurs in a separate northern outcrop area of Maud Dolerite, and a small past gold production is recorded (Kruse et al., 1994).

The Chessman-Red Queen Au occurrence occurs to the SSW of Mt Gates and the host is recorded as Maud Dolerite (Kruse, op. cit.) although no such lithology is shown on
the published geological maps, and on the basis of previous geological reports, mafic
volcaniclastics of the Plum Tree Creek Volcanics are more probable hosts.

The Carpentaria Valley occurrences further east, comprise copper mineralisation in
sheared, brecciated and altered Maud Dolerite and there is a record of minor past
production (Kruse, op. cit.).

No gold occurrences have been reported in EL10213.

Numerous NE-trending dolerite and/or lamprophyre dykes cut the Lower Proterozoic
sequence and have a magnetic expression.

A hiatus followed until Cambrian times when flood basalts of the Antrim Plateau
Volcanics and the overlying Tindal Limestone of the Daly Basin were deposited.
Their outcrop, together with local remnants of Cretaceous sedimentary rocks,
conceals older units in the southern third of the project area.

According to mapping by the AGSO, within EL10213 the basement geology occupies
erosion windows of Lower Proterozoic Tollis Formation rocks that correlate with the
host rocks of the Maud Creek gold field immediately to the west. The prospective
sequence is irregularly exposed by creek erosion of onlapping younger Proterozoic,
Palaeozoic and Mesozoic cover.

The sequence of greywackes, cherty tuffs and siltstones is folded about east west
striking axes and fault sets. There are no apparent gold-prospective northerly striking
structures or sequences and the area has been initially downgraded.

5. PREVIOUS EXPLORATION

The company is not aware of previous work on the tenement area, though it would
have been subjected to prospecting of the creek systems for gold at some stage.

The area of prospective Tollis Formation rocks is intermittently exposed due to the
intervention of onlapping non prospective younger sandstones, Cambrian volcanics
and alluvium. It is regarded as an eastward extension of the Maud Creek Gold Field
sequence.

Mapping by the NT Geological Survey has been carried out on the tenement.

A photogeological study of the Maud Goldfield was commissioned by Harmony in
2002-2003.(Snodin) This work covered part of EL10213 and was supported by some
ground traverses. Lack of available photo coverage limited the work to the western
sector of the EL. Magnetic and radiometric data that covered the full tenement area
were also studied by Snodin in the preparation of his interpretation.

6. WORK CARRIED OUT YEAR ENDING 19/6/04

Following two seasons of intensive diamond and RC drilling at the Main Zone gold
deposit, Harmony concluded that the Maud deposit did not meet its corporate
objectives. In addition it was too distant from the Burnside JV’s main centre of
activity at Brocks Creek. In addition, the closer Union Reefs operation, which had been a means of treating Maud Creek ores in 2000, was closed.

These factors combined to compel Harmony to seek a buyer for the Maud Creek project tenements in 2003-2004. Some interest has been expressed by potential buyers during the intervening period and more time is needed to conclude negotiations.

This change of direction meant that during the year no further field work was carried out on the project area including EL10213.

7. **EXPENDITURE STATEMENT YEAR ENDING JUNE 19TH 2004**

Work related to the promotion and sale of the Maud Creek project was apportioned to EL10213. This work was costed at $500.00.

8. **FORWARD PROGRAM 2004-2005**

The assessment of resource drilling and exploration potential in the adjacent Maud Creek project tenements by potential buyers is still in progress. No field work is planned for the coming period on EL10213 and Harmony’s expenditure is to be focused on the Burnside Joint Venture project area near Brocks Creek, Zapopan and Cosmo Howley.

Again, further activity during the period will be focused on the promotion and sale of the Maud Creek Project assets, including EL10213. This expenditure is estimated pro rata to amount to $500.00
9. LIST OF REFERENCES


Geological Map Series, Katherine 1:250,000, SD 53-9 Map and Explanatory Notes.

Shaw J. Annual Exploration Report Year ending 19th June 2002, EL10213, for Hill 50 Gold Limited.

Shaw, J. Annual Exploration Report Year Ending 19th June 2003, EL10213, for Harmony Gold (Aust.) P/L. Internal report to DBIRD.

Snodin S. (2002). Photogeological Interpretation Map of the Maud Creek Area,